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LEADING ARTICLES

RATIONAL TREATMENT OF TYPHOID FEVER.

GEORGE L. SERVOS, M. D.

FAIRVIEW, NEVADA.

From every source we find that typhoid fever is very prevalent in all sections of the country at the present time, and that there is a very considerable mortality following this epidemic.

The etiology, pathology, symptoms, diagnosis and prognosis are so well known and understood, that it will be unnecessary to take them up in detail at this time, other than as may be required in reference to the treatment.

As is well known, typhoid fever is due to the ingestion of a specific micro-organism, which initially makes its attack upon the mucous membrane of the bowel, causing different degrees of inflammatory processes to appear, ranging in severity from catarrhal to phlegmonous, locally, with general systemic manifestations, due to the absorption of toxins from the bowel. These latter symptoms vary considerably in severity, based upon the local conditions.

In the institution of treatment, infection of the bowel should always be considered and that organ should be thoroughly cleared of its contents. This may be done by the ministration of calomel and podophyllin, followed by an effervescent saline to effect,

or until the bowel excretion is free from solids. If this mode of procedure proves ineffective, enemas may be administered, either alone or in conjunction with the agents given internally. In this way, the entire alimentary tract is thoroughly cleaned out and the mucous membrane of the bowel is left in fit condition for the administration of specific remedies, which will either remove, or retard the action of the micro-organism. In order that the bowel may be kept in as nearly aseptic condition, as is possible, intestinal antiseptics are indicated. Numerous agents have been advised for this purpose, but from the reports of a legion of practitioners, it has been seen that the sulphocarbolates have proven the most effective. These may be administered alone, as the calcium, sodium or zinc sulphocarbolate, or in combination in tablet form, each 5 grain tablet containing:

Zinc sulphocarbolate..... gr. $\frac{1}{2}$
Calcium sulphocarbolate.... gr. 1
Sodium sulphocarbolate... grs. $3\frac{1}{2}$
Bismuth salicylate..... gr. $\frac{1}{2}$
Menthol, q. s. to flavor.

Or a tablet of the same weight, having in addition 1 grain of thymol, has been found very applicable in typhoid.

The sulphocarbolates should be given in from 5 to 10 grains, at intervals of one to two hours until such time as the bowel discharges become odorless and of normal consistency, and then continued at greater intervals to maintain the effect. If there is a persistent diarrheal discharge, the dosage of the zinc salt may be increased by administering from one to five grains in addition to that contained in the combined sulphocarbolates.

If, after the establishment of practical asepsis, there is a tendency to costiveness, morning doses of a saline laxative, preferably one carrying 60 per cent of magnesium sulphate in effervescent form, will secure an easy movement of the bowel.

It has been the finding of many, who have reported on case after case, that many cases are carried through to a happy termination without resorting to any other agents than those mentioned above. In many instances, it has been reported that the course of the disease has been cut short by such procedure and that in most cases the action of the etiologic factor has been held in abeyance. When the bowels

have been thoroughly cleared of their contents and the sulphocarbolates given to full effect, the temperature almost invariably drops and continues at a low point throughout the entire course of the disease, providing of course that the intestinal antiseptics are exhibited to effect, at all times.

It has been found that where the antiseptic line of treatment is followed strictly, there is less tendency to either hemorrhage or perforation and that the local inflammatory process is held in check at all times.

Should the temperature be high at any time, it will be found that it will be easily controlled by use of the combination of aconitine gr. 1-134, digitalin gr. 1-67 and strychnine arsenate gr. 1-134, given at intervals of from one-half to one or two hours, to effect, or until the temperature drops. Nuclein, in from 5 to 10 drop doses, or up to 20 drops, per os, is indicated in all cases of typhoid, thus establishing an artificial leucoctyosis. Nuclein may be administered hypodermically in like dosage.

If the bowel discharges are offensive, in extreme, copper arsenate in from 1-250 to 1-1000 gr. may be given at half-hour to hour intervals until the discharges are odorless, but if the sulphocarbolates are pushed to full effect, there will be little need of any other antiseptic.

As to diet, there is a wide diversity of opinion. Some authorities suggest a full diet of non-irritating foods, while others depend wholly upon milk and other fluids, but the reports of cases under full feeding have been such as to make one believe that this mode is the better one. There is less loss of tissue under such diet and the patient passes into convalescence in a much less weakened condition, than has been the case where the fluid diet has been strictly adhered to, and under the antiseptic treatment outlined above, this would seem to be the rational line of diet to follow. Under such diet and treatment there is no tendency to fermentation of the food ingested, and consequently the diet may be fuller than would be the case were other than the antiseptic procedure followed.

For the special symptoms, quinine arsenate is suggested to control the remittent fever, cactin and digitalin for cardiac waverings, echinacea to lessen toxemia, calcium sulphide to overcome the infection, codeine to control pain, hyoscyamine in delirium and ergotin and hydrastinine for hemorrhage.

When convalescence has been established, a general tonic of

Strychnine arsenate..... gr. 1-134
Quinine arsenate..... gr. 1-67
Iron arsenate..... gr. 1-67
Nuclein..... gtt. 4

in tablet form, is indicated. This may be administered in dosage of 1 to 3 tablets three or four times a day and will be found an admirable reconstructive tonic in this condition.

It has been found by hundreds of practitioners, in all parts of the country that, when the antiseptic line of treatment has been adhered to strictly, the course of the disease has been cut short of the accepted normal, by a considerable length of time and that the patient has passed into convalescence in better condition than when the disease has been allowed to run its course without interference of this sort. Down to very recent date, typhoid fever was classed among the "self-limited" diseases, and it was thought that, no matter what treatment was instituted, it would run a certain course, regardless, but as has been the case in many other conditions, so-called "self-limited" it has been found that rational treatment cuts short the course of the disease, or holds the more important symptoms in abeyance, should the disease run its anticipated course.

It has been said by some authorities that it is impossible to obtain asepsis of the bowel, and that is possibly true in so far as full asepsis is concerned, but nevertheless, when antiseptic treatment is instituted, and carried to full effect, namely, odorless and normal stools, it is apparent that there is something in the idea that intestinal antiseptics produces results. If the micro-organism is held in abeyance as to action, much has been accomplished, and the indications following the use of the sulphocarbolates are much as to make one believe that they are more or less active when applied to overcome sepsis. Be it as it may, it has been demonstrated that intestinal antiseptics are active not only in typhoid, but other bowel irritations, as well, and that as rational or definite therapeutic agents the sulphocarbolates hold a substantial position as remedial agents.

An interesting feature noted in connection with the recent pellagra conference was the fact that the geographical distribution of pellagra and hookworm disease are nearly identical. Whether the presence of the hookworm parasite increases the predisposition to pellagra is a point for further investigation.

"THE PHYSICAL BASIS OF LIFE;" QUERY.

JOSEPH CLEMENTS, M. D.

WICHITA, KAS.

This discussion in query is anent the address of the president of the Association of American Physicians, published in *Science*, May 21, 1909. Some preliminary statement of some relevant facts may be aidful in the brief discussion.

Life is entital as a concept, and is phenomenal when in expression, or put on exhibition. Life in abstract in ratiocination may be said to have a physical basis in the living matter, but in the concrete of the phenomenal—the physiological—the living thing has bases in the physical and the psychical. Life may be conceived without additional concept of energy, force, for life in abstractive thought is energy, and distinct from its physical basis, the gross matter, chemically manipulable, and, until physics shall have determined as to the problem of matter and energy, the distinction must remain in recognition as heretofore—force as a property of matter as yet not being tenable in disposing of the question. Moreover, the psychic is an entital factor too, in concept. In the designative conception of the organic or living phenomenon recognition is imperative of the psychic, qualitative directivity as manifest in the congruity of the phenomena, the grouped physical factors, and their cycling and directed activities, effecting functions and constituting the functional, or organized in the physiological. This is a factor objectively determinable and active, as are all other objective factors of the living organism.

And this is precisely the same in kind and role throughout the entire living world. So that whatever shall be as the final word of physics, and as to psychics, regarding the intimate in the real and valued of the entital factors in the physiological in ratiocination these distinctions will obtain, and must be taken into account in interpretation, and, thus discriminating, the basis of life in the concrete, or physiological, is psycho-physical, or the physical with a psychic factor in directivity to its functional, as the facts do testify.

The "living matter" is the physical basis of life by a general consensus since Huxley used the terms thus. The word protoplasm is much used, and not in such discrimination as the exactions of science demand. Bioplasm (Beale) or life plasm more correctly designates the living matter, the

physical basis of life. From the physicist standpoint protoplasm—first formation—may designate that peculiar, unique substance, its entity and phenomenon being extra the realm of physics, but not so as to chemistry; chemistology knows nothing of the formation of living matter. To chemistry this is simply life-plasm, nothing more, and in response to the first more chemically to ascertain the nature of its constitution, or methodology in formation, something happens, and the thing is no longer either the bioplasm of the chemist, or protoplasm of the physicist designation, but a nondescript article, which, however, as debris, goes into disintegration to the original or elemental of physics.

Protoplasm is bioplasm in initial move in the coming into entity of structural tissue, at least the facts would legitimise the use of the term as designative of the matter in that stage of the biological game, may it be said? Cells are protoplasmic, it may not be termed a "cell" until there is a distinct, chemically determinable move from the condition of the pristine living matter. The "cell" has body or membrane or something of the kind in the nascent to suggest and warrant its naming. The initial in the physiological, factors and phenomena, may be observed and chemically determined to be cellular, and isolated as to the cell, and, even determined more primitively yet, nevertheless, the protoplasm—first formation—of the living matter itself is beyond human knowledge and skill, and consequently synthetic "foods" (?) and "chemical plants," "radiobes" and the like, are well enough in their way—they serve to isolate and mark the inimitability of the real.

In the cell we have the living matter plus "protoplasm" in the first formation of tissue structure—chemical compounds in the nascent. These come into entity; what may chemistry evidence as to the phenomenon? The nutrient substance—which I hold to be the marvel product of the living matter in the physiological—may be determined as to its chemical composition, and when taken up by intussusception—an old term, but apt, still—into the substance of the living matter, intracellularly, loses its molecular identity in a phenomenon of which chemistology can give no account. And when, as the sequel of disturbed equilibrium in the increased intracellular mass, tissue structures come into entity in Karyakinesis, etc., that part of the phenomenon is not a la chemistry, it is simply biologic, as the utmost of our knowledge in designation or interpretation.

In a given chemical reaction the known atomic and molecular composition of each member of the equation may be traced and redetermined, not so here. After absorption the nutrient molecule is lost irrecoverably—this is not a chemical phenomenon, the chief characteristics being absent. With these non-too-familiar facts in mind we may proceed in our discursive query.

The first point to note is as to the author's discussion of the problem of "The Physical Basis of Life," beginning with the cell, and using the term "unit" and not "basis?" Some modification in explanation of the terms used is given, but still leaving the point queriable. The cell is the anatomic unit of the organism, the unit of the physiological as a phenomenon, but these are not the same as the problem of life as to its basis, or unit without the further designation as to organism or phenomenon. Life in the abstract is a concept; life in concretion in conception is a phenomenon, and the physical basis, or the unit, of the latter is something more than the former. Is not the cell misleading as the point of departure, the cell, not the living matter in specificity? The writer has to confess mysticism in point of view in the author's first statements, as follows: "The cell may be regarded as the morphological unit of life, but form in and of itself, and as recognized by the eye, is not essential to the manifestation of life. We know no life apart from matter, and matter and energy are the only things we do know. When matter becomes endowed with life, it does not cease to be matter; it does not lose its inherent properties; it is not released from the laws that govern its structure, its attractions and its motions. In studying the organized cell of living things, whether vegetable or animal, bone or brain, it should be borne in mind that it is material in composition, subject to the fundamental laws that govern matter, and possessed of the properties essential to matter." Now, much of the above so self-evident to a man with the M. D. degree that their commonplaceness almost suggests the query: Is there in the content of these things that which we have not caught up with, giving importance to these half apparent platitudes?

Other of the statements quoted seem to lack relevancy to the specific point, and exactness. What has the above to do immediately with the physical basis of life in scientific precision? Life is not to be found here, in such generalities, in either factor or ratiocination, for life, as in quest, will certainly be illusive on this route. That

which Huxley had in mind and expressed in the title of the address, is not in specificity mentioned. ". . . no life apart from matter, and matter and energy are the only things we do know" means so much in the general, has it any meaning or relevancy in the special matter in consideration here and now? The physicist may find life in awareness with the cell, but not so the biological chemist whose branch of science demands and lead to specificity in distinction.

"Rhythmic metabolism" awakens query, also, "active molecules" consisting of "numerous atoms, each atom containing a large group of electrons in ceaseless, rhythmic motion," etc. This smacks of physics, not of life as to its physical basis or unit, for what of this do the facts of the biological chemist show? Were the above phenomena of physics discovered from experiments with matter that is endowed with life, or may any thing of the kind be demonstrated it being the material in use?

Again in query: "Metabolism, the one characteristic phenomenon of living matter, involves intramolecular change; consequently the molecule, and not the cell is the unit of life." But now the specificity is so exact as to be damning, is it not? Metabolism in the sense or degree in which it may be thought to resemble the biologic involves the intramolecular changes as above. Such change in metabolism as to the organic compounds which are factors in the biological is perhaps even more marked. But, does metabolism involving intramolecular change designate in a tenable sense the intracellular phenomenon in the formation of the living matter? for that is the crux in the problem. No known facts evidence molecular existence, much less intramolecular change, with the marvelous of electronism, with electric charge and display in bombardment, etc. This may go with the "half-alive molecule" (Burke), but bioplasm gives no evidence of any such thing that medical studies give entree to. Where is the rival of the late Professor Lionel S. Beale, of London, King's College, as a microscopist? He speaks of a mass, not a molecule, of matter one one-hundred-thousandth of an inch in diameter, ninety-five per cent of this being water, "alive," and giving evidence of it. The "cell" is a big thing in comparison, but is not "alive" as that speck of bioplasm is. Is not the cell alive merely in a general sense, and by virtue of the presence and power of that and like masses of matter endowed with life? The cell is not alive in all its parts equally.

The man with a suitable microscope, with good eyes and steady fingers, and patience, may himself see, in the very act, the origination of new foci of life intracellularly, involving the formation of new bioplasm.

Does it not follow, therefore, that a biological chemist may be said to know life apart from matter, in concept, and as that factor with which a certain chemically definable substance, of course dead, may and will become endowed with life? Dead cells never are so endowed. Life does not originate or initiate its activities in that way.

Professor Vaughan says: "Life is function and not form, and moreover it is molecular function." Query: Is not life at this stage of quest in the discussion a phenomenon, rather than a function? Is it not too large and complex for the designation function? In the physiological we know function as the outcome or result of the completion of certain grouped and cycling processes, having bases in the physical of grouped forms of matter. Where, then, is the meaning or relevancy of "function of life not form?" and what is the function achieved molecularly before the complexing into the larger or molar groupings? and what is the molecular in the bioplasm, which is the sole originating and initiating agency in the effecting of all functionalism?

Once more: "Normal processes are purposeful," would not the fact here involved be more correctly stated by substitution of the term purposive for purposeful? Our author says further: "The movements of infusoria are certainly purposeful, if not conscious." Had purposive been the term used would the "conscious" been dreamed of? All the phenomena of the physiological are purposive—with purpose to an end, as a factor of their content. None are purposeful in the subjective, for that is the sense of the purposeful, hence the "if not conscious." The purposive may be and is simply the objective, and as an objective factor of the phenomenon exhibiting the purposive factor. Does not the purposeful not only imply and mean in its etymology the subjective, and this, imperatively the conscious? While use of the purposive relieves of the embarrassment and conclusion. From query to asservation is but a step, here the step is taken.

Professor Vaughan holds in his own hand, apparently unconsciously, the key to the whole physiological situation, and which may open every door in the organic mansion. I do wish to call attention to the fact that low forms of life in which there

is no trace of nerve tissue behave in a purposeful manner," substitute the word purposive and here is the golden key. The bugbear of psychology has been the notion of the brain as the organ of the mind, the soul having "seat" there—somewhere. Hence at least animal organisms have soul or mind of some sort—in their purposeful psychism. Physiology—with the fact of "low organisms in which there is no trace of nerve tissue"—should long ago have exploded the bubble of "The brain the organ of mind."*

All living things "behave" purposively, not purposefully—there is no subjective behavior evidencible in the physiological phenomenon as such, or in its primalism. The only physiological phenomenon which gives evidence of subjective or purposeful behavior is the human. All other physiological activity is purposive, objective, accounted for by the psychism of directivity in the organized or functional. There is an objective psychism in "The life of micro-organisms." There is no subjective or purposeful "choice" in "lower organisms." There is no "animal mind." The dualism in, "we know only matter and energy," must be enlarged to a trinity in that we do know the factor of the psychic or psychism in equal sense and degree as is our knowledge of the other two factors. These three, matter, energy, psychism are fundamental, and equally entital and essential in the physiological phenomenon.

In man, the psychism in the subjective complexes the physiological in which the objective psychism in the purposive is a factor of the phenomenon in its primalism, and marks a new departure in evolutionary progression.†

1537 S. Main St.

Of Diagnostic Aid in Cancer.—R. Weil in New York, and later Crile and others found that the blood serum of animals and man affected with cancer, gained certain distinctive, hemolytic properties and that, likewise, the erythrocytes behaved in a peculiar manner, and Brieger and his collaborators discovered a change in the antipyretic power of the blood serum in cancer patients. Both of these reactions, but especially Weil's reaction, without being quite specific for cancer, may be used as a supplementary aid in diagnosis.—Dr. Leo Loeb.

*The writer has been doing this for years past in medical journals.

†See my "The Metaphysics in the Nature and in the Conception of the Soul." The Roxburgh Publishing Co., Boston.

PYURIA IN LATENT GENITO-URINARY LESIONS.*

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SAN ANTONIO, TEXAS.

That the presence of pus in the urine, even in small quantities, may be indicative of a condition possible of the gravest results is so well known, we are warranted in making a careful analysis of all cases presenting this symptom. The frequency of its occurrence and its extremely varied pathological import renders the study of this symptom unusually extensive, and one which, in detail embracing its etiology could not be encompassed in a paper of this brevity.

My excuse for broaching the subject in an incomplete manner is prompted by a desire to attract interest to methods of diagnosis whereby we may determine the location of the lesion producing the symptom, thereby materially aiding us in our differential diagnosis and subsequent treatment.

Bearing in mind that the presence of pus in the urine is always the result of bacterial action, the most common agencies being the gonococcus, the staphylococcus, and the bacillus tuberculosis, a previous history of the patient is of great assistance and may oftentimes shorten our labor. Other concomitant symptoms, relative to character and location of pain, if present, urethral discharge and frequency of urination are, if possible, to be elicited.

Presupposing that the ordinary urinary test glasses have been used, without materially helping us to locate the seat of pus formation, and remembering that no portion of the genito-urinary tract is exempt to this condition, a systematic search of the entire field is oftentimes necessary before the actual focus of infection is demonstrated. This search should be exhaustive and, in order to obviate the risk of carrying infection upward, where it may not already exist, the examination should begin at the meatus.

We frequently find at the meatus a congenitally contracted condition which, possibly accompanied by a phimosis, may be a sufficient source of irritation to invite bacterial invasion of the adjacent urethral mucosa. Should this be the case the lips may appear everted and unusually sensitive. A smear should be here made and examined.

After gently washing out the anterior urethra with a mild antiseptic or normal saline solution we next proceed to examine this structure by passing in as far as

the anterior fold of the triangular ligament an endoscope sufficiently large to well dilate the urethral wall, the instrument of Koch being well adapted for this location. Should a small meatus prevent the passage of a moderate sized instrument, a preliminary meatotomy is necessary.

The instrument being passed and the obturator withdrawn, a retrograde inspection of the urethra is made, carefully noting any changes in the color or apparent connective tissue formation. About one inch anterior to the triangular ligament we may locate the outlets of the ducts of Cowper's glands and, as these are frequently the seat of pus formation, close attention should be paid them. An applicator may be used at this point in order to obtain a specimen for later examination. Carefully withdrawing the tube, we examine the canal to the meatus, in the same manner noting all points of interest, including any possible enlargement of the ducts of Littre's glands.

The next proceeding is the examination of the posterior urethra which, after irrigation, is best accomplished with the aid of an endoscopic tube having a curved beak to facilitate its easier introduction. For this purpose the posterior urethroscope of Swinburne is well adapted. With this instrument, the floor of the prostatic and membranous urethra are easily examined. It is advisable in most cases, before introducing the endoscope to the posterior urethra, to instill a few drops of a 4 per cent solution of cocaine in order to secure anesthesia to this normally quite sensitive region. In the prostatic portion the verumontanum is the most interesting structure and, from a clinical standpoint, the most important. It may present a number of pathological changes. The openings of the ejaculatory ducts may be sought and examined. The membranous urethra, lying between the two folds of the triangular ligament and surrounded by the compressor urethrae muscle, is chiefly of interest as being the favorite seat of stricture formation.

On completing the urethral examination, the entire canal is again irrigated and the bladder subjected to the same procedure, from four to six ounces of the solution used being allowed to remain in that viscus. Our attention is now turned to the body of the prostate and the seminal vesicles. This examination is made by the index finger of one hand lubricated and introduced into the rectum, aided by pressure from above over the symphysis with the other hand. The examining finger easily appreciates any irregularities in shape or size and may

* Read before the Bexar County Medical Society, March 3, 1910.

elicit tenderness, if present. Thus we may frequently determine the presence of an acute or chronic inflammation and, occasionally, the presence of calculi. After massaging the prostate, during which operation the secretion expressed is collected in a clean watch crystal or other receptacle, a portion of the fluid left in the bladder is expelled, thereby freeing from the urethra most, if not all, of the prostatic secretion. The finger is now reinserted, and the seminal vesicles on either side and above the prostate should be stripped, the fluid likewise collected for examination, thus cleansing the urethra after the vesicle stripping.

The examination of the bladder is next in order. Two styles of instruments are in use, one for water dilatation, the other to be used with air as the dilating medium. Each method has its advantages and each its advocates. The same may be said regarding the views given in the various instruments. At the present time it is possible to obtain a combined cystoscope which allows of either air or water dilatation, and giving direct or indirect views. For the so-called precipitate bladder, in which the base is on a much lower plane than the vesicle neck, or in which prostatic projections of material size are encountered, the indirect view with water distension is the only means whereby a satisfactory examination may be made. In the main, the instrument selected should be that with which the operator is most familiar. I have endeavored, with little success, to use various cystoscopes which, in the hands of those most accustomed to their use, secured very satisfactory results. The air dilating cystoscope of Lewis, and the water dilating instrument of Albarran, have been to me most useful.

The important steps necessary to accomplish a satisfactory examination of the bladder are a foreknowledge that the urethral caliber is of sufficient size to admit of the passage of a suitable instrument, that irrigation has been accomplished, and that a sufficient degree of anesthesia is present to allow of easy manipulation of the cystoscope. The patient should be in the modified lithotomy position, with the trunk slightly elevated and the thighs flexed on the abdomen. The inspection of the bladder should include a search for new growths, sacculations, calculi, inflammatory areas, ulcerations, and the intravesical condition of the prostate. The occurrence of inflammation is usually met with at the base and near the orifices of the ureters. The possible absence of one, or presence of more than two ureters, should

not be overlooked. At the ureteral orifices at intervals may be seen the issuance of urine in minute jets. If the medium of examination be water, and this has not become too clouded by the presence of pus or active bleeding, the urine, on its escape from the ureter, may be noticed to vary one side from the other, both as to appearance and frequency.

Having failed up to this time to establish the origin of the pus, we next ascend, by means of the ureteral catheters, the ureters on either side. In so doing, we may determine the presence of stricture or calculi. The catheters are first passed a few inches above the ureteral orifices, allowing them to remain a sufficient time in which to collect samples of urine for purposes of examination; after which they are passed on up to the renal pelves, from which points the urine is also collected. Should the pyuria be found dependent upon a lesion of one or both kidneys, we should then seek to determine, by suitable tests, the amount of functional impairment of these organs, which may serve as a guide regarding the proper course of treatment to be pursued.

Moore Building.

THE ADVANTAGES OF THE URINE EXAMINATION.*

HENRY R. HARROWER, M. D.

CHICAGO, ILL.

By dint of persistent work on the part of laboratory investigators, the examination of the urine has at last become generally recognized as an essential part of an thorough medical examination by both medical profession and laity. All first class insurance companies now require some sort of a urine examination as a part of the usual investigation of the prospective policy holder.

The advantages of this procedure may indeed be summed up in a single sentence: "No one diagnostic procedure gives so many and so varied therapeutic pointers as does a thorough urinary analysis."

In the title of this paper the word "possibilities" might well have been substituted for the word "advantages." The possibilities of the urine examination are by no means as circumscribed as is usually supposed. Even in these days of efficiency in medicine, the ordinary "examination" of the average physician does not imply very

* Reprinted from advance proof of book in press.

much more than the simple tests for albumen and sugar; and the opportunities for making a valuable investigation of the condition of any individual are surely missed unless, in addition to the old-time simple qualitative examination, a thorough-going physical, quantitative as well as qualitative chemical and microscopic examination is made.

Contrary to an impression that is still quite prevalent, the urine analysis does not give information as to the condition of the kidneys alone. True, the presence of certain definite urinary findings is usually considered good evidence of the presence of equally definite disease-conditions in the kidney structure itself, but this is only a very small part of the information that can be gained.

If this were the only purpose served by the urine analysis, its office would be an exceedingly meager one, for in the first place, its value would be limited to corroboration, simply confirming what had already been observed from physical examination, and in the second place it would only serve to disclose what is known as terminal disease, i.e., practically hopeless changes in the tissues themselves. Thus the outcome of the common search for albumen and casts in the urine is to demonstrate those diseased conditions of the kidney which are classed (in honor of a famous physician), under the name of Bright's disease. But by the time these conditions are thus shown to be present, the kidney tissues are degenerated to such an extent that the urinary findings are of little or no therapeutic value.

But, fortunately, since the days of Dr. Bright, the work of hundreds of progressive investigators, both at the bedside and in the laboratory, has proved beyond a shadow of a doubt that the earliest beginnings of kidney disturbance are disclosed in a complete urine examination long before the serious and destructive organic processes have begun. In other words, the functional disturbance is manifested before organic change is present. And while the course of an established nephritis or Bright's disease is not specially benefited by the urine analysis, if the analysis is made early enough, its insidious onset may be noted and appreciated in time to render valuable preventive treatment. Usually, however, such an examination is not made unless some special reason arises for making a complete and thorough investigation, and it is only in the exceptional cases that the opportunity is thus gained to save the unsuspecting individual from the trouble

to which he is unwittingly, but nevertheless most surely, becoming a victim.

To be of the greatest possible value to the individual the urine examination should be sufficiently complete and exhaustive not only to detect the actual evidences of disease, but to lay bare those seemingly harmless conditions, which when consummated, may become serious and all too often hopeless. In addition to this, the frequency of the tests is a matter of importance, for as previously stated, serious trouble is very frequently averted because of the accidental finding of some specific point of importance. To change this preventive measure from a mere accident into a premeditated, systematic search, it is suggested that a regular and thorough examination of the urine be made, from time to time, for such individuals as may appreciate the advantages that such a service would be to them. This affords a very good insight into the ups and downs of their metabolism, or the workings of the intricate parts of the body as a whole.

The urinary analysis made periodically, and that, too, without the necessity of the presence of evident ill-health as a reminder of the need for it, enables the man who is "burning the candle at both ends" or living the abnormal sedentary life so very common in large cities, to forestall the conditions that his high-tension life are inevitably causing, before extended damage has been done, and chronic disease has seized upon him in the prime of his business or professional life.

Probably the most common abnormal findings in the urine of the average individual are those which are due to or associated with disordered functions of the alimentary tract. From the mouth to the rectum, disturbances which are seemingly trivial mirror their presence unerringly in the secretion of the kidneys. As an illustration of this, extended experiment has shown a definite relation between pyorrhea alveolaris, a serious and unfortunately common mouth disease, and the presence of certain abnormal substances in the urine. Again, an eminent French authority has expressed himself as believing that more information of value can be obtained regarding stomach disease by the examination of the urine than by one of the stomach contents themselves, although personally I believe that both examinations in conjunction would offer still more satisfactory service. The diseases of the liver and gall bladder often manifest themselves in their early stages by abnormal findings in the urine, in this way calling attention to the disordered

condition before it has manifested itself in the usual outward ways.

The intestinal canal—that "hot-bed of iniquity" in the human body—shows more deviations from the normal than any other part of the food-canal. Certain poisonous substances manufactured from the putrefying intestinal contents are taken up into the blood, causing innumerable aches and pains, malaise and languor, nervousness and irritability, as well as a host of other very common and equally unpleasant conditions. In the wonderful protective economy of the body it becomes the duty of every part to assist in ridding the blood of any excess of poisonous materials that it may be carrying. The kidneys have to do a large part of this work and the presence (and for that matter, the extent of the presence) of these substances in the urine is a sure guide to the seat and extent of the trouble, and incidentally a danger-signal of extreme value. By following its guidance, a halt may be called upon the improper and extended use of the kidneys for carrying off waste products which normally should pass out through the bowels. It must be evident that should such conditions be allowed to continue unchecked, the overburdening of the kidneys with more than their proper share of the work must eventually result in a crippling of their functional capacity.

As an index of the nutrition and metabolism of the body the urine stands preeminent. If an individual is not receiving sufficient nourishment, this fact will quickly be shown in the urine examination. If the oxidizing power of the millions of body cells is deficient or increased, that, too, will be manifested very quickly in the relation between the different substances passed out in solution in the urine. By very extended experiments the various urinary salts, organic and inorganic, have been shown to be very serviceable guides to the condition of the different parts of the body. For example, the phosphatic index and its fluctuations has been shown to have a definite bearing upon the nervous system and its nutrition, and in this way serves to point out the beginning of trouble which might, if allowed to proceed the usual course unchecked, soon go from bad to worse.

One might almost go on *ad libitum* and enumerate the various urinary findings and their several importance, but this is not the function of this paper. The main idea of the writer is simply to call attention to the fact that a careful, regular and methodical investigation of the various substances normally eliminated in the urine and their relations to one another, together

with a series of tests to prove or disprove the presence of any abnormal substances which might be present, will undoubtedly serve to call attention to the earliest beginnings of chronic disease, and in this way prove one of the most important prophylactic measures that it is possible for an individual to take, no matter whether he may be in seeming good health or a semi-invalid.

Such a service, if made systematically, may in time be classed with the many excellent measures adopted and fostered by the state and municipal governments, which in the present century are beginning to usher in the era of preventive medicine.

72 Madison St.

The Return of Halley's Comet.—A popular account of "The Return of Halley's Comet," with remarks on comets in general, by William H. Pickering, assistant professor of astronomy, Harvard University, will be a feature of the April Century. The comet's splendid aspect in the past is only one phase of the interest with which its reappearance is awaited by astronomers and the public, to whom, it is promised it will be visible to the naked eye in late April, and in May and June. Prof. Pickering's article covers a wide field of comet lore, and while discounting the belief that comets have a malignant influence, he gives a table of curious coincidences of catastrophes with "comet years."

Tinea Tricophytina of the Labium Minorum.—An interesting case of the above is described by Dr. Thompson Sweeney, in Post-Graduate. Although ringworm is a disease of the skin commonly found on many parts of the body, the author does not believe there is a previous report of the lesion appearing on the mucous membrane of the vulva and simulating a venereal affection. In the case reported, there were no other ringworms on the body; the patient was 27 years old, married and in good general health. The inner aspect of the right labium minorum was the seat of the disease and, save for the scales being moist and macerated, the lesion bore the same characteristic size, form, appearance and growth as is found in ringworm of the skin. The disease may easily be mistaken for some other condition, but microscopical examination of scrapings and the finding, as in this case, of the mycelium and spores of the trichophyte will clear up the diagnosis.

THE MEDICAL FORTNIGHTLY

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EDITORIAL

A general propaganda for the education of the youth of the country in sexual mat-

**Is There a
Venereal Peril
for Us.**

ters and as a matter of moral prophylaxis (or should we say "im-moral prophylaxis?") is spreading over the country. Societies have

been established in various of the cities and the work of prevention is well inaugurated. We are not so sure that this work should not be directed purely to the parents and the work with the younger generation left to them, but there is abundant reason for concluding that parents are woefully indifferent and ineffective in such matters. Personally we would greatly resent any interference on the part of school teacher or preacher or other person with a child of our own in any such intimate matter, and we have profound doubt whether such instruction can be given by other than parents without magnifying the very evil it is purposed to eradicate; certainly the average school teacher is most unfit to attempt such work. The establishment of these societies has brought with it the question: Is there really a venereal peril? Few city physicians would for a moment entertain such a question, we know the answer. But beyond personal impression and observation there is need of argument and we have been pleased to read conclusions of Colonel Hoff of the U. S. Army,* who gives the following affirmative statistics of the prevalence of venereal diseases in the army, and inferentially in the country, to support him in this:

"It may be asked, is there any legitimate basis of comparison between civil and military vital statistics? Perhaps more as to venereal diseases than any others, for these pertain chiefly to youth and early manhood, the soldier age. Taking the average an-

nual rate of syphilis in our army for the current century as the probable rate for those of military age, 18 to 45 years, the number of syphilitic men in the United States last year was 271,700. Assuming that an equal number from the previous year were undergoing cure, and allowing for those previously uncured, it is not unreasonable to conclude that there are today over a half million syphilitic men in the United States. Adding to the 500,000 syphilitic men, 1,500,000 with gonorrhea, and making a reasonable allowance for chancroid, we may safely estimate that at least two million men suffered from venereal diseases in the United States last year. How many of the other sex likewise suffered the author does not dare even to surmise. What loss to the country is involved in venereal morbidity? In the military service it is a large item equivalent in our army to the services of an entire regiment every day. It is not believed that the number of days lost by civilians is so great as in the army, but, if we assume that the average nonefficiency of the civilian, from venereal, is half that of the soldier, say ten days for gonorrhea and twenty for syphilis, the time lost last year on account of venereal was approximately twenty-five million days. The economic value to the country of these lost days is worth considering. All this, and the important part syphilis plays in the mortality of the race, justifies the belief that there is indeed a venereal peril for the United States, and that it behooves us to realize it and take immediate steps to abate it. Successful measures of control have been introduced in the army, and these should be made known to the people at large.

But a few years since there was among the friends a physician who had been compelled

**What About the
Serum Diagnosis
of Syphilis?**

by ill-health to absent himself from active work for a period of two years, during which time he did but little medical reading,

regaining health and coming back to practice he hesitated about assuming his work until he should have gone away and mastered the intricacies of the opsonic index, and could be with difficulty convinced that it would be possible to successfully practice medicine without doing so. While we are convinced that there is no danger of any physician knowing too much, and we would not belittle any phase of medical

* Medical Record, November 27, 1909.

education, we do feel that many learned men are placing undue emphasis on certain phases of our work, even to the point of forgetting the importance of developing the five senses and training them to bring us to definite conclusions without the aid of the more complicated of the laboratory aids. There is a great chance to become a faddist as a physician, and the fad proposition is closely allied with the adoption of methods and manipulations before they have been thoroughly tried out in the laboratories and clinics and their efficacy permanently established. The adoption and abandonment of one after another procedure, or the relegation of one and another to a place of comparative unimportance is of so frequent occurrence that it causes little comment. And this brings us to our subject. We can see with no trouble that there are cases where the serum diagnosis is of incalculable value. But to be of dependable value it must be invariable in its accuracy if properly applied. The statistics on the subject are interesting, but they lead the average man to questioning. They tell us that out of 416 cases of primary syphilis the reaction was positive in 69.8 per cent, but they do not tell us whether the subsequent clinical facts developed that the 30.2 per cent were not infected. If even a small proportion of these cases showed subsequent syphilis, or if a part of the larger number failed to develop the regular clinical picture we fail to see that any advantage is secured by the method. The Wasserman reaction has come to stay, but it is not destined to supplant all other evidence, nor is it infallible. It will settle to its proper position among the methods presently. Speaking on this subject before a recent meeting of the Jackson County (Mo.) Medical Society, Trimble very completely covered the subject in so far as our present knowledge goes, while we are not yet ready to give so great dependence to the reaction as he grants, we are nevertheless ready to allow that in numerous cases it may be of great service and should not be overlooked. Trimble states that the real question for the clinician relative to the reaction is: "Does a positive reaction indicate syphilis?" Dr. Lesser, after examining two thousand cases, comes to the conclusion that the answer must be yes. However, at present a negative reaction may not be conclusive. The technique is not yet perfect in the hands of all investigators along this line. In these two thousand cases Lesser obtained three positive reactions in which lues could be positively excluded. Positive reactions have been obtained in

scarlatina, as high as 50 per cent, but the reaction in such instances differs somewhat from a positive Wassermann and disappears after the fever. Lesser claims that in doubtful cases of congenital syphilis, in cases of interstitial keratitis and in beginning general paralysis of the insane a positive reaction is absolutely diagnostic.

As to the value of a reaction there can be but little dispute. Such investigators as Balaschko, Boas, Baure, Beckers, Noguchi, Flashman, Butler and others regard a positive reaction as diagnostic of syphilis. None of these men regard a negative reaction as excluding syphilis.

The positive reactions which have been met with in scarlatina, leprosy, yaws and occasionally in other diseases in no way undervalue the test.

Balaschko holds that the change in a reaction due to the effect of mercury is temporary only, and that the treatment should be continued long after the reaction has been reported negative.

Noguchi tabulates a series of cases as follows: Primary syphilis, 416 cases, 69.8 per cent positive; secondary syphilis, 1,605 cases, 89.4 per cent positive; tertiary syphilis, 581 cases, 78.1 per cent positive; early latent syphilis, 1,233 cases, 51 per cent positive; late latent syphilis, 861 cases, 48 per cent positive; hereditary syphilis, 125 cases, 94.5 per cent positive; cerebrospinal syphilis, 64 cases, 47.6 per cent positive; general paralysis, 498 cases, 88.1 per cent positive; tabes, 216 cases, 62.66 per cent positive.

According to his own system he gives the following recorded eye cases: Interstitial keratitis, 12 cases, 8 positive; iritis, 6 cases, 4 positive; scleritis, 1 case, 1 negative; paralysis external rectus, 1 case, 1 negative; optic neuritis, 1 case, 1 positive; choroiditis, exudative, 1 case, 1 negative; optic atrophy, 5 cases, 5 negative.

The local campaign against consumption was given a new impetus by the day spent here by Dr. S. Adolphus Knopf as the guest of the Tuberculosis Commission. Dr. Knopf spent March

17th making addresses and meeting the workers, an address before the students of each of the two largest medical schools during the day, and an address before a general audience in the Third Baptist Church in the evening. The evening address being delivered before a mixed audience was shorn of technical terms, and was

**Dr. Knopf's
St. Louis Visit.**

practical in the extreme. Dr. Knopf is a man of charming personality and convincing address; he has earned for himself a place among the foremost phthysiologists of the world; we find it difficult to see why he should continue to be introduced as the author of the "prize essay." The essay was one of the remarkably meritorious things of his career, but it is but an incident in a life of great activity and usefulness; what he is now doing in his home city and the influence and assistance he is giving the work elsewhere are matters of vastly great-



DR. S. A. KNOPF.

er importance which should be more emphasized.

The evening address was filled with sentences which catch the ear and stick; ideas which must remain with the hearer and bear fruit in the betterment of conditions for an unfortunate class of the community. The representatives of the press caught the following, which are well worth repeating to medical men:

"A consumptive who is clean and conscientious can be as safely associated with as you or I. Only let the tuberculosis sufferer do his part to prevent infecting others and it then becomes your duty to treat him as you would any other friend or acquaintance.

"There should be no home work for school children. When they are dismissed they ought to play until bedtime and then get a long night's sleep.

"It should be against the law to build a schoolhouse without a swimming tank, and every pupil ought to learn how to swim as a part of his course."

Personal precautions, inspection of milk and other food, municipal lodginghouses and education of the general public are among his recommendations.

Bernard Greensfelder, on behalf of the Municipal Commission on Tuberculosis, called the meeting to order, and introduced Acting Mayor Gundlach, who presided. Dr. William Porter spoke briefly and introduced Dr. Knopf.

At Detroit, Dr. George A. Fritch was sentenced to serve from seven and one-half to fifteen years in the State penitentiary at Jackson for manslaughter in causing the death of Maybelle Millman, of Ann Arbor, by means of an unlawful operation last August.

Medical Society of the Missouri Valley.—The semi-annual meeting of this society was held in Omaha, Neb., March 17 and 18, under the presidency of Dr. A. B. Somers. The program, which was an excellent one, occupied the better part of two days, and one night session. The address in Medicine by Dr. Frank Parsons Norbury, of Kankakee, Ill., was a classic production, outlining the "Physical Basis of Mental Disease." The address in Surgery by Dr. Leonard Freeman, of Denver, was a comprehensive review of Local Anesthesia as practiced by the foremost surgeons of the day. We hope to present abstracts of these addresses, as well as of the other twenty-four entertaining papers read at this meeting. The following resolutions were adopted unanimously:

Whereas, This is the day of specialized technical training along all lines of scientific care for the defective, dependent and delinquent classes of society, and

Whereas, We, the Medical Society of the Missouri Valley in convention assembled, believe that only such men and women as have had this special training should be appointed to and retained in care of said defective, dependent and delinquent classes; be it therefore

Resolved, That the Medical Society of the Missouri Valley hereby especially commend the passage of such civil service reform laws as shall demand the merit system of appointment and a retention in all our public institutions for the above classes; and that we deprecate the relegation of such appointments to the political spoils system as not being in conformity with the best results to those unfortunates entrusted to the care of these institutions, and to the community at large.

The profession of Omaha was cordial in the reception of its guests, a number of entertainments, dinners, etc., being enjoyed by those in attendance. The next meeting will be held in Council Bluffs, in September.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

The Medical Complications, Accidents and Sequels of Typhoid Fever and the Other Exanthemata. By H. A. Hare, M. D., B. Sc., Professor of Therapeutics in the Jefferson Medical College, etc., Philadelphia, and E. J. G. Beardsley, M. D., L. R. C. P., Philadelphia. With a special chapter on the Mental Disturbances Following Typhoid Fever, by F. X. Dercum, M. D., Professor of Nervous Diseases in the Jefferson Medical College. Second edition, thoroughly revised and much enlarged. Octavo, 398. pages, with 26 engravings and 2 plates. Philadelphia and New York: Lea & Febiger, 1909. (Cloth, \$3.25, net.)

Every practitioner is necessarily concerned with typhoid, owing to its wide prevalence, its often puzzling symptoms, its many complications, the serious sequelae, and the mortality, which still remains high, though much reduced from former figures. Of all diseases it is one of the most difficult to describe typically, as it exhibits wide variations, almost protean. Till a physician has mastered its aberrant forms, he does not understand the disease, and is open to disastrous error. Hare's useful book has proved the interest taken in its special subject by the exhaustion of an edition and the call for a new one. In preparing it, Dr. Hare has associated Dr. E. J. G. Beardsley, and the joint authors have effected a most thorough revision, representing all advances to date of issue. A valuable new feature is found in the addition of the other exanthemata. The literature of this whole great group of diseases is epitomized, and combined with the experience of the authors in private and hospital practice. Thus refreshed and enlarged, this standard guide and reference work is again at the service of the profession.

The Metaphysics of the Nature and in the Conception of the Soul Its Habitat. By Joseph Clements, M. D. Bound in cloth, decorative covers, 12mo, printed on high-grade paper. At all bookstores, or by mail, to any address on receipt of price, \$1.00. Wichita, Kas.: Joseph Clements, 1537 South Main Street.

The above embodies or rather sets forth a new conception of the soul or mind, new, in that it is from an a posteriori not an a priori basis or point of view. The facts which science furnishes are the starting point, and the true nature of the soul takes form and entity in one's conception as the argument proceeds, gathering force as it goes on.

The soul or mind is as big as the universe since it can comprehend and try to interpret it; it may not, therefore, be put into the nutshell of matter in brain, or gland, or cell, or center.

This essay scouts the idea of anything less than the cosmical as source of the soul, and so takes of it that larger view which is in keeping with the character and status which its potencies and promise both warrant and demand.

Whatever may be said of the doctrine of "Reincarnation," so termed, this little book shows that in this organic or earth life each soul makes its first appearance. Nothing is possible other than this.

Moreover, whatever theological questions or difficulties may be raised or created by this discussion, the fact of the "Immortality of the Soul" is put on the same basis as the "Conservation of Energy" in cosmic science and philosophy.

The conception of the soul here formed is of the simplest as to its mundane association and contingency, and at the same time it is as high and far-reaching as to be limitless in its relationships and evolutionary possibilities.

Teaching as a Profession.—Teaching as a profession has been changing in character for many years. This applies to all grades from university professors down. It has become too much a commercial calling and not so much as formerly an honored profession—a lamentable state of affairs for which the public is largely responsible. It is by no means an exaggeration to say that at present teachers are the most over-worked, most undervalued, and most underpaid public servants in the country, with the sole exception of the clergy, who seem to be in about the same category. Young men of promise are not entering the ministry in sufficient numbers, for the same reason that they do not enter the profession of teaching. The rewards are not sufficient, and the honor is no longer of its former importance. Clergymen and teachers are becoming mere hired men. They are expected to make bricks without straw, and they get few thanks for their pains. Just why people should pay physicians and other professional men so well and so willingly for their services, while they criticise the teachers who are looking after the welfare of their children, is one of the things no logical man can understand.—From "What is Wrong with Our Public Schools," by Joseph M. Rogers, in March Lippincott's.

A MEDICAL JEST.

There's naught to make the sufferer grin,
In abscess, boil or tumor;
Although physicians find therein
Considerable humor.

CORRESPONDENCE

PROGRESSIVE MUSCULAR ATROPHY.

To the Medical Profession:

A gentleman of means, has a member of his family afflicted with progressive muscular atrophy, the diagnosis having been with certainty established after consultation with some of the highest neurological authorities of New York and various cities of Europe. These physicians are unanimously of the opinion, that the case is incurable, inasmuch as up to the present, there has been published no form of treatment or medication which is known to have positively cured or arrested the inroads of this malady.

This gentleman wishes to spare no effort to bring relief. He believes that perhaps somewhere some physician may have successfully hit upon some method of curing a case of progressive muscular atrophy, but who through his inability to corroborate his results, owing to rarity of cases or through modesty, or for fear of being discredited, has failed to publish his case. This gentleman's idea is to try and bring this record to the surface by making an appeal to the profession through this journal.

The case itself presents the characteristic picture and is typical of progressive muscular atrophy in every particular. The patient is fifty years old; married; in excellent general health. About one and one-half years ago, the disease made its appearance in the left hand, progressed, and within a few months, involved the right hand. Its progress since has been very slow. The family of this patient wishes to announce that any physician who supplies a complete history and detailed description of the method of treatment of any case of progressive muscular atrophy he may have successfully treated, the trial of which leads to the cure or arrest of the disease in their relative, will be rewarded by a liberal cash prize.

Requests for further particulars and replies should be addressed to "Enquirer," care of the Medical Fortnightly.

Editor the Medical Fortnightly:

I am pleased to announce to my friends in the profession, that I have now associated with me my son, Dr. Estill D. Holland.

The firm name will be that of Drs. Holland and Holland. Our practice will be limited to medicine, genito-urinary work, minor surgery, diagnosis and consultation. Eighteen years of practice in Hot Springs has familiarized me with the special needs

of diseases that visit this resort for a "cure." As diagnosticians we are equipped with the most modern laboratory, and are prepared to make any kind of bacteriological, pathological or physiological-chemical examinations.

Thanking you for the patronage of the past, we trust that your confidence will continue and pleasant relations be maintained. Furthermore, we invite your correspondence and personal visits.

Thomas E. Holland, M. D.
Hot Springs, Ark.

Among the people of the earth, except those of Australasia, the Americans are the most liberal meat eaters.

Don't fail to note the condition of the kidneys in all drug eruptions, as such eruptions may denote inactivity of those organs.

A Branch of the American Urologic Association.—The urologists of the Middle West have nearly completed arrangements for a district organization, which is to have its initial meeting in Chicago later in the month. The multiplicity of societies is somewhat confusing to the man who cannot afford time to attend all, but we believe that this specialty has been somewhat backward in this respect and that more complete organization can work only good.

The Illinois State Association Meeting.—The advancement of the date of the Hannibal meeting of the Missouri State Society to the first week in May, because of the coming of the A.M.A. to St. Louis in June, makes it possible for Missouri physicians to attend the Illinois meeting without neglecting home duties. The Illinois Association meets at Danville on May 17, 18 and 19, and an urgent invitation is being sent to all who are interested in the work which is to be presented.

New York Antivivisection Bill.—On February 23, the usual annual hearing upon the antivivisection bill was held by the Assembly Judiciary Committee in Albany. The opposers of medical advance were represented by Mrs. Diana Belais of the New York Antivivisection Society, and Stephen Coleridge, the active head of the movement in England. The medical profession was represented in the argument by Dr. Simon Flexner of the Rockefeller institute, Prof. Frederic S. Lee of the College of Physicians and Surgeons in New York, and Dr. James Ewing of the Cornell Medical School.

MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

ABSTRACTS OF RECENT PAPERS ON CANCER.

C. W. HEPBURN, M. D.

The Early Diagnosis of Cancer of the Breast and Best Operative Technic.—In *Pennsylvania Medical Journal* for Nov., 1909, Dr. William L. Rodman, after discussing early diagnostic methods, says that operation is the only treatment for cancer of the breast and the earlier and more radical the procedure the better. He advises that the axilla be attacked first. The advantages of working from axilla to sternum are as follows: First, the axilla may be so deeply involved that any attempt at removal would be fruitless, and the sooner this is ascertained the better. Second, the blood vessels can be reached and tied at their origin, hence the same vessel is not cut several times, as is necessarily done in working from sternum to axilla; therefore, shock and hemorrhage are greatly lessened. Third, it is both easier and better to dissect the axillary space from above downward, as the dissection is begun beyond the boundaries of the disease. Fourth, the great danger of expressing cancer cells, as a result of manipulating the infected mamma and lymph nodes, to surrounding tissues, even to remote organs, is largely, if not wholly, avoided. Handling of the infected breast is dangerous. Fifth, if the work is begun at the sternum a dissection en masse is sometimes made impossible, as the mass will pull on and break the axillary tail if not held by an assistant; this should be avoided. Greater exactness is possible if the incision is begun at the axilla, and therefore use of the arm will be less interfered with. The author considers it of the greatest importance not to allow the incision to extend onto the arm, but to confine it to the chest, as the cicatrix resulting from an incision carried onto the arm frequently hampers its movements. The axilla is reached by a straight incision extending from beneath the clavicle to an inch or less below the tendon of the pectoralis major and two finger breadths internal to the sulcus between arm and chest. This permits perfect access to and work in the axilla and interferes in no way with the future usefulness of the arm. Early and free removal before metastases have occurred to neighboring structures should insure a permanent cure in 80 per cent of all cases.

The Present Status of Cancer Research.—

In *Pennsylvania Medical Journal* for Nov., 1909, Dr. Leo Loeb presents an outline of a few of the salient features of the present status of cancer research. Whether or not cancer is a parasitic disease can neither be affirmed nor absolutely denied at the present time. All attempts actually to demonstrate the presence of a micro-organism have failed so far. It has been shown, beyond a doubt, that various nonspecific physical or chemical stimuli are among the best established factors in the pathogenesis of cancer. Ordinary somatic cells, without any predisposing embryonal maldevelopment or without any postfetal misplacement can in certain cases become transformed into cancer cells under the influence of long-continued irritation. A similar effect of individual mechanical stimuli can be very well demonstrated in the case of cancer cells. Through such stimuli it is possible to increase the proliferative energy of certain tumors, and such an increase is a cause of the greater virulence of recurrent tumors so frequently observed after operations. All attempts to influence the growth of tumors by substances which have proved, especially in the hands of Ehrlich, so efficient in the treatment of protozoal diseases, have failed. Positive results have been obtained in producing active immunity against tumor growth in animals by Gaylord, Clowes, Sticker, and others, but these results, important as they are from a theoretic point of view and however promising they may be, at the present time do not admit of any application in man for the following reasons: These immunizing inoculations have so far been effective only if they were made before the tumor had been transplanted they were without avail, in cases in which the tumor growth had already commenced at the time of the immunization. Furthermore, all these experiments relate almost exclusively to transplanted, not to spontaneous, tumors, with which alone we have to deal in man. The principal weapon in the struggle against cancer still consists in the thorough extirpation of the tumor. As to preventive measures, the only advice to be given is to avoid long-continued irritation of any kind as much as possible.

Cancer of the Mouth and Lip.—Dr. Ernest Laplace explains, in *Pennsylvania Journal of Medicine* for Nov., 1909, the mortality of this disease, 11 per cent of all deaths from cancer, to be due to two factors: (1) Free metastasis, owing to the vast lymphatic supply of the mouth and tongue by

which these vessels reach the lymphatic ganglia of the neck; (2) the excessive virulence soon acquired by malignant disease of the mouth and tongue, owing to the added irritation of the saliva and bacteria of the mouth, and also the mechanical irritation of food. It is about ten times more frequent in men than in women. The author's "conclusions" gives a clear idea of the scope of his paper: 1. Cancer of the mouth shows itself amenable to successful surgical treatment only in the earliest stages. 2. A diagnosis by laboratory methods based upon the intrinsic changes of the body alone can furnish the diagnosis sufficiently early. 3. This should be combined with the clinical diagnosis. 4. An immediate and copious removal of the growth should be practiced, followed by thorough thermocautery cauterization. 5. We should remember that until a method of immunizing the patient is discovered, whereby the intrinsic predisposing condition of the patient is changed to a normal condition, no surgical operation nor any method of treatment will insure a non-recurrence of the disease either in situ or in some other part of the body. 6. The excision of a bit of tissue for diagnostic purposes must be deprecated, for fear of infecting the deeper tissues. 7. The profession at large should abstain from the usual cauterizations, used as a tentative treatment, which may aggravate the case to the extent of placing it beyond a surgical cure. Every wart, mole or ulcer in the mouth, no matter how benign in appearance, is a potential cancer when the patient possesses those intrinsic causes which give susceptibility to malignancy, and should be promptly removed.

The Differential Diagnosis of Gallstones, Ulcer and Cancer of the Stomach.—Dr. Christopher Graham has an interesting paper under the above caption in *Pennsylvania Medical Journal* for Nov. 1909 of which the following is the summary: In gallstones the general health does not suffer until complications are present. The course of ulcer is prolonged and fluctuating periods of trouble and periods of perfect health; but in cancer it is short and steadily downward. Pain in gallstones is irregular in time, of sudden onset and of severe, short duration, abrupt cessation, radiates to right arch and back and is independent of food. In ulcer pain is usually clear-cut, in spells, regular in time and eased by food to again reappear in from two to four hours. In cancer the pain is continuous, dull depressing and not only is not controlled by food, etc., but is immediately increased by

it. In gallstones the vomiting is less a factor in diagnosis. It is small in amount unless the attack is soon after a meal. It is usually bitter, sour bile and is not so often a means of relief, nor does it play any part in the state of nutrition (except during late complications). In ulcer vomiting is as regular as is pain, and consists of sour material, not offensive and if abundant, is often excessive in liquids. It brings complete relief and is controlled as is the pain. Vomiting in cancer is irregular, and the vomitus large in quantity of poorly macerated food mass. It is foul often blood stained and brings great, though rarely complete ease. In gallstones gas is troublesome only at the time of the colic; it may be excessive and give the distressing upward pressure, but immediately disappears on cessation of cramps. Perhaps this sensation is due less to gas than to the radiation of pain. In ulcer gas is a symptom at a time when other symptoms are present, and is controlled in the same manner that the other symptoms are controlled. In cancer the gas is continuous and increased in amount, with periods of great increase usually soon following food. Blood is rare in gallstones; in ulcer it is quite rare (in about one-fourth of the cases), but in cancer it is common (two-thirds of the cases) both by stomach test and fecal examination. In gallstones the patient is normal physically, save when there are late complications with pancreatic disturbance. In ulcer the patient is hopeful and active, though often reduced in nutrition. In cancer the patient is depressed, languid, weakened, tired, melancholy, discouraged, pale and perhaps cachectic.

Reception to Dr. Sajous and Dr. Schamberg.—The medical faculty of Temple University of Philadelphia held a reception on February 19th, in honor of Dr. Charles E. de M. Sajous and Dr. Jay F. Schamberg, who were recently elected members of the faculty. Dr. Sajous will occupy the chair of therapeutics at the university and Dr. Schamberg that of dermatology.

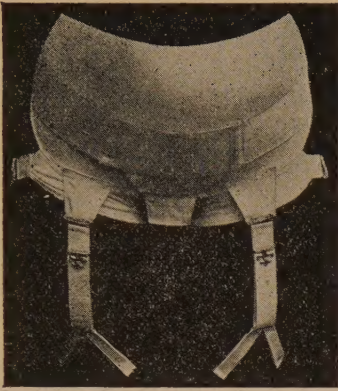
Amalgamation of Medical Societies in Milwaukee Planned.—An amalgamation of the Milwaukee Medical Society and the Milwaukee County Medical Association may be effected within a short time. At a meeting of committees representing the two organizations Monday night, it was decided that the library owned by the Milwaukee Medical Society shall become the joint property of both organizations.

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CLINICAL THERAPEUTICS

A forum of original experience with new remedies, to which scientific contributions are invited.

Tonsillitis.—(By Charles J. Drucek, M.D., Chicago, Ill., Professor of Physiology at the Illinois School of Dentistry, etc.)—In the treatment of tonsillitis it is well to remember that this disease is at first only a local disturbance and if promptly and efficiently treated will remain so. The systemic symptoms—fever, headache, etc., only develop when there is considerable infection taken up. Therefore the following course should be instituted early in the case. The first indication is to increase local circulation, and the best therapeutic agent is heat. In the first place confine the patient as much as possible to the

house. Children should be put in bed. By staying indoors the patient breathes warm air only, usually free from dust and other irritating substances. The external application of the hot water bag greatly increases the venous circulation and so relieves the congestion, as does also the drinking of hot water. This drinking bathes the parts as well as adding a large amount of water to the bowels and so increases the action of both bowels and kidneys, and washes out the infection as it is taken up by the system, the drinking of water also increases arterial tension which prevents stasis. A local remedy must fill two requirements. A detergent antiseptic and a degree of permanency of effect. Many of the remedies are antiseptic, but they are not exosmotic enough to increase the circulation, or else their effect is too transient and their use tires the patient. Locally I have grown to use but one remedy and that is glycothymoline. I prescribe equal parts of glycothymoline and water to be used in an atomizer. I get better results with this than anything else I have used. I always use it in an atomizer because gargling is necessarily painful, while a spray is not. Glycothymoline promptly relieves the dry congested condition, and by adhering to the tonsil protects it from external irritation. Its anodyne effect is immediate and lasting. I instruct my patient to use it frequently and because it is pleasant and its action prompt, I find that they need no other instruction but use it thoroughly. As glycothymoline is non-poisonous, it makes no difference as to how much is swallowed and its action does not upset the stomach, but tends rather to assist the destruction of any of the plugs that may be swallowed. I find by this method of treatment that my cases are nearly all cured in twenty-four to thirty-six hours. That I need no other medicament at all, because the system does not become clogged with toxins. I report below two cases, not for their individuality, but because their prototypes are constantly occurring to every physician: Baby J., child six years old, had been sick for two days and the previous day the mother had seen sore throat and treated it with salt, vinegar, etc., to which the child rebelled. When seen, I put child on spray of equal parts glyco-thymoline and hot water and allowed sipping of hot soups and liquids; advised use of spray every half to one hour. Next morning mother telephoned I need not come as the child was perfectly well.

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